

<p>Substitute for form 1449A/PTO</p> <p>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</p> <p>(use as many sheets as necessary)</p>				Complete if Known	
				Application Number	10/585,178
				Filing Date	October 3, 2008
				First Named Inventor	Kenneth N. RAYMOND
				Art Unit	1797
				Examiner Name	To be determined
Sheet	1	of	4	Attorney Docket Number	061818-02-5009-US

U.S. PATENT DOCUMENTS					
Examiner initials*	Cite No. ¹	U.S. Patent Document Number-Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	A1	4,855,225	08-08-1989	Fung et al.	
	A2	5,047,519	09-10-1991	Hobbs Jr., et al.	
	A3	5,049,280	09-17-1991	Raymond et al.	
	A4	5,252,462	10-12-1993	Drevin et al.	
	A5	5,820,849	10-13-1998	Schmitt-Willich et al.	
	A6	5,989,823	11-23-1999	Jayasena et al.	
	A7	6,406,297	06-18-2002	Raymond et al.	
	A8	6,515,113	02-04-2003	Raymond et al.	
	A9	6,864,103	03-08-2005	Raymond et al.	
	A10	7,018,850	03-28-2006	Raymond et al.	
	A11	7,442,558	10-28-2008	Raymond et al.	
	A12	US 2002-0128451	09-12-2002	Raymond et al.	
	A13	US 2002-0188111	12-12-2002	Raymond et al.	
	A14	US 2005-0058604	03-17-2005	Raymond et al.	
	A15	US 2008-0213917	09-04-2008	Raymond et al.	
	A16	US 2008-0213780	09-04-2008	Butlin et al.	
	A17	US 2009-0023928	01-22-2009	Raymond et al.	
	A18	US 2010-0151591	06-17-2010	Butlin et al.	
	A19	US 2010-0167289	07-01-2010	Butlin et al.	

FOREIGN PATENT DOCUMENTS					
Examiner initials*	Cite No.	Foreign Patent Document Country Code ² Number ⁴ Kind Code ⁵ (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	B1	WO 1992/11039	07-09-1992	U.S. Army	
	B2	WO 1997/045539	04/12/1997	Kubista, Mikael et al.	
	B3	WO 2000/048991	08/24/2000	The Regents of the University of California	
	B4	WO 2008/063721	05/29/2008	The Regents of the University of California	
	B5	WO 2008/092120	07/31/2008	Lumiphore, Inc.	
	B6	CA 2,099,542	07-02-1993	Bayer Aktiengesellschaft	
	B7	EP 0578067	06-24-1993	Bayer AG	

Examiner Signature	Date Considered
--------------------	-----------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.¹ Applicant's unique citation designation number (optional).² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04.³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3).⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible.⁶ Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)				Complete if Known	
Sheet	2	of	4	Application Number	10/585,178
				Filing Date	October 3, 2008
				First Named Inventor	Kenneth N. RAYMOND
				Art Unit	1797
				Examiner Name	To be determined
				Attorney Docket Number	061818-02-5009-US

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁶
	C1	BLOMBERG, et al., "Terbium and rhodamine as labels in a homogeneous time resolved fluorometric energy transfer assay of the β subunit of human chorionic gonadotropin in serum", <i>Clinical Chemistry</i> , 45(6):855-861 (1999).	
	C2	BROOKER, S. et al., Chemical Abstract 2002: 593344 (2002).	
	C3	BÜNZLI, et al., "Towards materials with planned properties : dinuclear f-f helicates and d-f non- covalent podates based on benzimidazole-pyridine binding units", <i>Journal of Alloys and Compounds</i> , 249:14-24 (1997).	
	C4	CARDULLO, R. et al., "Detection of nucleic acid hybridization by nonradiative fluorescence resonance energy transfer", <i>Proc. Natl. Acad. Sci. USA</i> 85:8790-8794 (1988).	
	C5	CHEN, et al., "Lifetime- and color-tailored fluorophores in the micro-to-millisecond time regime", <i>J. Am. Chem. Soc.</i> , 122(4):657-660 (2000).	
	C6	DAHLÉN "Detection of Biotinylated DNA Probes by Using Eu-Labeled Streptavidin and Time-Resolved Fluorometry" <i>Anal. Biochem.</i> , 164:78-83 (1987).	
	C7	DE SÁ, et al., "Spectroscopic properties and design of highly luminescent lanthanide coordination complexes", <i>Coordination Chemistry Reviews</i> , 196:165-195 (2000).	
	C8	DEXTER, D.L., "A Theory of Sensitized Luminescence in Solids", <i>Journal of Chemical Physics</i> 21: 836-850 (1953).	
	C9	DICKINS, et al., "Synthesis, time-resolved luminescence, NMR spectroscopy, circular dichroism and circularly polarised luminescence studies of enantiopure macrocyclic lanthanide tetraamide complexes", <i>Chem. Eur. J.</i> , 5(3):1095-1105 (1999).	
	C10	DICKSON, et al., "Time-resolved detection of lanthanide luminescence of ultrasensitive bioanalytical assays", <i>Journal of Photochemistry and Photobiology, B: Biology</i> , 27:3-19 (1995).	
	C11	GALAUP, et al., "Mono(di)nuclear europium(III) complexes of macrobifunctional cryptands derived from diazatetralactams as luminophores in aqueous solution", <i>Helvetica Chimica Acta</i> , 82:543-560 (1999).	
	C12	HEID, C. et al., "Real time quantitative PCR", <i>Genome Res.</i> 6:986-994 (1996).	
	C13	HEMMILÄ, et al., "Development of luminescent lanthanide chelate labels for diagnostic assays", <i>Journal of Alloys and Compounds</i> , 249:158-162 (1997).	
	C14	HIGUCHI, R. et al., "Simultaneous Amplification and Detection of Specific DNA Sequences", <i>Bio/Technology</i> 10:413-417 (1992).	
	C15	HOCHSTRASSER, R. et al., "Distance distribution in a dye-linked oligonucleotide determined by time- resolved fluorescence energy transfer", <i>Biophysical Chemistry</i> 45:133-141 (1992).	

Examiner Signature		Date Considered
--------------------	--	-----------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.¹ Applicant's unique citation designation number (optional).² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04.³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3).⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible.⁶ Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)				Complete if Known	
				Application Number	10/585,178
				Filing Date	October 3, 2008
				First Named Inventor	Kenneth N. RAYMOND
				Art Unit	1797
				Examiner Name	To be determined
Sheet	3	of	4	Attorney Docket Number	061818-02-5009-US

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁶
	C16	HOLLAND, P. et al., "Detection of specific polymerase chain reaction product by utilizing the 5'→ 3' exonuclease activity of <i>Thermus aquaticus</i> DNA polymerase", <i>Proc. Nat. Acad. Sci. USA</i> , 88:7276-7280 (1991).	
	C17	JOHANSSON et al., "Time Gating Improves Sensitivity in Energy Transfer Assays with Terbium Chelate/Dark Quencher Oligonucleotide Probes" <i>J. Am. Chem. Soc.</i> , 126(50): 16451-16455 (2004).	
	C18	KNIGHT, C.G., "Fluorimetric Assays of Proteolytic Enzymes", <i>Methods in Enzymology</i> 248: 18-34 (1995).	
	C19	KOSTRIKIS, L. et al., "Spectral Genotyping of Human Alleles", <i>Science</i> 279:1228-1229 (1998).	
	C20	LEE, L. et al., "Allelic discrimination by nick-translation PCR with fluorogenic probes", <i>Nucleic Acids Res.</i> 21:3761-3766 (1993).	
	C21	LEE, L. G. et al., "Seven-Color, Homogeneous Detection of Six PCR Products" <i>BioTechniques</i> 27:342-349 (1999).	
	C22	NAZARENKO, I.A. et al., "A closed tube format for amplification and detection of DNA based on energy transfer", <i>Nucleic Acids Res.</i> 25:2516-2521 (1997).	
	C23	OST, H., <i>Journal Prakt. Chem.</i> 2:110-111 (1876).	
	C24	PETOUD et al., "Stable Lanthanide Luminescence Agents Highly Emissive in Aqueous Solution: Multidentate 2-Hydroxyisophthalamide Complexes of Sm ³⁺ , Eu ³⁺ , Tb ³⁺ , Dy ³⁺ " <i>J. Am. Chem. Soc.</i> , 125: 13354-13325 (2003).	
	C25	SABBATINI, et al., "Luminescent lanthanide complexes as photochemical supramolecular devices", <i>Coordination Chemistry Reviews</i> , 123:201-228 (1993).	
	C26	SAHA, et al., "Time-resolved fluorescence of a new europium chelate complex: Demonstration of highly sensitive detection of protein and DNA samples", <i>J. Am. Chem. Soc.</i> , 115:11032-11032 (1993).	
	C27	SELVIN, P., "Fluorescence Resonance Energy Transfer", <i>Methods in Enzymology</i> 246:300-334 (1995).	
	C28	SEQUOIA, E., "Complexes of Lanthanide Perchlorates", <i>Inorganica Chimica Acta</i> , 37:1 L-449-L451 (1979).	
	C29	SOINI, et al., "Time-resolved fluorescence of lanthanide probes and applications in biotechnology", <i>CRC Critical Reviews in Analytical Chemistry</i> , 18(2):105-154 (1987).	
	C30	STEEMERS, et al., "Water-soluble neutral calix[4]arene-lanthanide complexes: Synthesis and luminescence properties", <i>J. Org. Chem.</i> , 62:4229-4235 (1997).	
	C31	STEINBERG, I., "Long-Range Nonradiative Transfer of Electronic Excitation Energy in Proteins and Polypeptides", <i>Ann. Rev. Biochem.</i> 40:83-114 (1971).	

Examiner Signature		Date Considered
--------------------	--	-----------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.¹ Applicant's unique citation designation number (optional).² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04.³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3).⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible.⁶ Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)				Complete if Known	
				Application Number	10/585,178
				Filing Date	October 3, 2008
				First Named Inventor	Kenneth N. RAYMOND
				Art Unit	1797
				Examiner Name	To be determined
Sheet	4	of	4	Attorney Docket Number	061818-02-5009-US

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁶
	C32	STENROOS, et al., "Homogeneous time-resolved IL-2IL-Ra assay using fluorescence resonance energy transfere", <i>Cytokine</i> 10(7):495-499 (July 1998).	
	C33	STRYER, L., "Fluorescence Energy Transfer as a Spectroscopic Ruler", <i>Ann. Rev. Biochem.</i> 47:819-846 (1978).	
	C34	SYVÄNEN et al., "Time-resolved fluorometry: a sensitive method to quantify DNA-hybrids" <i>Nucleic Acids Research</i> , 14:1017-1028 (1986).	
	C35	TYAGI, S. et al., "Molecular Beacons: Probes that Fluoresce upon Hybridization", <i>Nature Biotechnology</i> 14: 303-308 (1996).	
	C36	TYAGI, S. et al., "Multicolor molecular beacons for allele discrimination", <i>Nature Biotechnology</i> 16:49-53 (1998).	
	C37	VEIPOULOU, et al., "Comparative study of fluorescent ternary terbium complexes. Application in enzyme amplified fluorimetric immunoassay for α -fetoprotein", <i>Analytica Chimica Acta</i> , 335:177-184 (1996).	
	C38	VICENTINI, et al., "Luminescence and structure of europium compounds", <i>Coordination Chemistry Reviews</i> , 196:353-382 (2000).	
	C39	VOSS, H. et al., "Direct genomic fluorescent on-line sequencing and analysis using <i>in vivo</i> amplification of DNA", <i>Nucleic Acids Research</i> 17:2517 (1989).	
	C40	WANG, G. et al., "Design and Synthesis of New Fluorogenic HIV Protease Substrates Based on Resonance Energy Transfer", <i>Tetrahedron Letters</i> 31: 6493-6496 (1990).	
	C41	WANG, Y. et al., "Rapid Sizing of Short Tandem Repeat Alleles Using Capillary Array Electrophoresis and Energy-Transfer Fluorescent Primers", <i>Anal. Chem.</i> 67:1197-1203 (1995).	
	C42	WHITCOMBE, D. et al., "Detection of PCR products using self-probing amplicons and fluorescence", <i>Nature Biotechnology</i> 17:804-807 (1999).	

Examiner Signature		Date Considered
--------------------	--	-----------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.¹ Applicant's unique citation designation number (optional).² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3).⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible.⁶ Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.